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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LAU, HOI CHING	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,595	STEPHENS ET AL.	
	Examiner	Art Unit	
	Hoi C. Lau	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *20 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-30 have been examined.

Response to Amendment

2. The Office acknowledges the changes made to the claims by the applicant. The objection of claims 27-30 of their dependency has been withdrawn.

Response to Arguments

3. Applicant's arguments filed March 20, 2006 have been fully considered but they are not persuasive. The followings are applicant's arguments:

a. Walton and Machi are related to two very different field of endeavor and intended use.

b. The different operating and regulatory environments in which Walton and Machi operate further indicated that one of ordinary skill in the art of Walton would not be motivated to look to Machi.

c. Machi does not teach or suggest what changes one of ordinary skill would be required to make if replacing the lamps in Figs 3 and 4 of Walton with side-emitting LEDs.

d. Figure 4 of Walton would result very little light through lens with the combination of Machi's side-emitting LED.

The followings are response to applicant's arguments:

1. Regarding argument (a), both Walton and Machi are in vehicle light, therefore they are in the same field. Also see rejection of claim 1.

2. Regarding arguments (b), (c), and (d), Machi is used to show one can use side-emitting LED if desired. Also see rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-14 and 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walton (U.S. 5,966,073) in view of Machi et al. (U.S. 2004/0196646).

Regarding **Claim 1**, Walton's device comprises:

A housing mountable to a vehicle (abstract and figure 5); and

A first light emitting diode mounted to housing (figure 4 and column 6, lines 1-42).

It fails to show the LED is side-emitting LED.

Machi's device teaches the conventional LED could replace with side-emitting LED (page 3, paragraphs 37 and 39) with modification of the mounting structure.

Walton teaches the LED housing device is intended use on land vehicle while Machi's device is directed to aircraft light wherein the intensity is dimmer, however, the

teaching of substitution of conventional LED with side-emitting LED would be obvious to ordinary skill in the art to adjust the intensity of LED to fit in specific environment, for example, by increase the supply voltage to increase the intensity of LED on land vehicle to compensate the daylight on road condition and modify the multi-face reflector for particular regulation.

It would have been obvious to one of ordinary skill in the art to directly substitute and implement side-emitting LED instead of conventional top-emitting or all-round-emitting LED as taught by Machi with the housing structure of Walton (figure 4) along with modified multi-face reflector for different angle propagation because the side-emitting LED would concentrate the emitting direction on the side while the light sources are correlate with the side reflector plate to increase emission range and propagation energy and eliminated the energy propagation in the front of LED for efficient power consumption along with regulation. It would eliminate the requirement of extra top reflector plate as other conventional housing to reflect back to the side reflector for light concentration when using the conventional front propagation LED. Furthermore, the light propagation would be in a wide range and able to have strong light emission in front direction with the incorporation of multi-faced reflector as long as the reflector has extended length over the side-emitting diode (see Mohacsi (U.S. 7,021,801), figure 2, 3 and 7)

It would have been obvious to one of ordinary skill in the art side-emitting LED is a alternative components of regular LED where either or both conventional LED and

side-emitting LED could be used which depended on product structure and would have been routine experimentation and optimization in the absence of criticality.

As to **claim 2**, Walton's device teaches a reflector, wherein reflector reflects the light emanating from first light-emitting diode (figure 4 and column 6, lines 36-42).

As to **claim 3**, Walton's device teaches the reflector is multifaceted (figure 4).

As to **claim 4**, Walton's device teaches a power source in electrical communication with first LED (figure 10 and 11 and column 7, lines 29-60 and column 8, lines 8-34).

As to **claims 5 and 6**, Walton's device teaches the front side mounted lights are generally visible for almost 180 degree (abstract and column 3, lines 49-66).

It would have been obvious to one of ordinary skill in the art to design the light assemblies which incorporates an effective reflector with LEDs to enhance the light output which allow the assembly to pass Department of Transportation light output requirements when viewed from a "top" angle and in certain degree form horizontal plane and vertical plane.

As to **claim 7**, Walton's device teaches a second LED mounted to housing (figure 4 and column 6, lines 1-42).

It fails to show the LED is side-emitting light emitting diode.

It is rejected for similar reasons set forth in the rejection of claim 1, supra.

As to **claim 8**, Walton's device teaches a light housing having two light source wherein conventional light-emitting diode is used for mounted to housing (figure 4 and column 6, lines 31-42).

It fails to clearly state the conventional light-emitting diode primarily emits light radially over a portion of the hemisphere located above light-emitting diode.

It would have been obvious to one of ordinary skill in the art the conventional light emitting diode comes with different light emitting angle and direction which depends on manufacture where it is able to emit over a portion of the hemisphere located above light-emitting diode or from all around the hemisphere.

As to **claims 9 and 10**, Walton's device teaches the light source being of generally yellow hue (column 4, lines 49-50 and column 9, lines 25-26).

It would have been obvious to one of ordinary skill in the art yellow hue is considered as within the visible electromagnetic spectrum.

As to **claim 11**, Walton's device teaches a cover mounted to housing (figure 4 and column5, lines 65-68).

As to **claim 12**, Walton's device teaches the cover is primarily in the visible electromagnetic spectrum (column 6, lines 31-35).

It also suggested that the multicolored cover may be unnecessary if LEDs are used (column 6, lines 31-35).

It would have been obvious to one of ordinary skill in the art the cover is clear transparent or multicolored transparent if LEDs are incorporated with the cover for light emitting output through the cover.

As to **claim 13**, Walton's device teaches the light source is in the yellow visible electromagnetic spectrum (column 4, lines 49-50 and column 9, lines 25-26).

It would have been obvious to one of ordinary skill in the art to design the LEDs with clear transparent cover or clear LEDs with colored cover as long as the assembles show the indication signals.

As to **claim 14**, Walton's device teaches the first LED transmits light at two intensity levels (column 8, lines 8-49).

Regarding **Claim 16**, it is a method claim corresponding to the apparatus of claim 1, and is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

As to **claim 17**, Walton's device teaches a cover and base to construct as a housing to protect the LED from weather or travel conditions (figure 3 and 4 and column 6, lines 1-17).

As to **claim 18**, it is a method claim corresponding to the apparatus of claim 1, and is therefore rejected for the similar reasons set forth in the rejection of claim 2, supra.

As to **claim 19**, it is a method claim corresponding to the apparatus of claim 1, and is therefore rejected for the similar reasons set forth in the rejection of claim 3, supra.

As to **claims 20 and 21**, Walton's device teaches to use the reflector and cover to focus the light emitted for the LED (column 6, lines 1-42).

As to **claims 22-24**, Walton's device teaches to use the clear or multicolored cover as a filter for filtering the light emitted for the LED which allow yellow or other

colors include clear white visual electromagnetic spectrum light to pass (column 6, lines 1-42).

Regarding **Claim 25**, Walton's device comprises:

A vehicle (abstract and figure 5); and

Means for indicating the state of vehicle (column 4, lines 16-29).

It fails to show the LED is side-emitting LED.

Machi's device teaches the conventional LED could replace with side-emitting LED (page 3, paragraphs 37 and 39).

It is claim corresponding to an apparatus claim 1 and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

As to **claim 26**, it is claim corresponding to the method claim 17 and it is therefore rejected for the similar reasons set forth in the rejection of claim 17, supra.

As to **claim 27**, it is claim corresponding to the method claim 18 and it is therefore rejected for the similar reasons set forth in the rejection of claim 18, supra.

As to **claim 28**, it is claim corresponding to the apparatus claim 4 and it is therefore rejected for the similar reasons set forth in the rejection of claim 4, supra.

As to **claim 29**, it is claim corresponding to the method claim 20 and it is therefore rejected for the similar reasons set forth in the rejection of claim 20, supra.

As to **claim 30**, it is claim corresponding to the method claim 22 and it is therefore rejected for the similar reasons set forth in the rejection of claim 22, supra.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walton (U.S. 5,966,073) in view of Machi et al. (U.S. 2004/0196646), in further view of Bromer (U.S. 6,476,715).

As to **claim 15**, the combination meets all the limitation of claims and Walton's device teaches a circuitry provides for alternating illumination intensity levels for LEDs (column 8, lines 8-49).

However, it fails to show the alternating illumination intensity levels are disclosed in a single LED.

Bromer's device teaches a circuitry wherein circuitry provides for alternating illumination intensity levels of a single LED (abstract and column 10, lines 20-26).

It would have been obvious to one of ordinary skill in the art to implement the alternating illumination intensity levels into a single LED assembly because it would provide extra indication and cleaner signal to the road-user or other vehicle driver about the state of the vehicle during nighttime or in a dark area.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoi C. Lau whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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